

Appl. No. : 09/013,172
Filed : August 21, 2000

REMARKS

This is in response to the Office Action mailed May 22, 2003. That communication indicated that Claims 22, 23, and 27 would be allowable if rewritten in independent form. This has been done above.

The remaining pending claims were rejected on a combination of references that included the newly cited Wilbur patent. However, this may not be necessary in that the claims have been significantly amended to overcome the latest rejections. These amendments were not previously made since the Wilbur reference was not of record. It is believed that the changes to the claims will not require further searching. Hence, although the rejection has been made final, it is respectfully requested that this Amendment be entered and that all of the claims be allowed. In the event that all of the claims are not allowed, Applicant respectfully requests that the Examiner withdraw the final aspect of the Office Action, since the reference was newly cited.

The Miller patent, which is the primary reference, is of course an example of the prior art about which Applicant's invention is an improvement. It illustrates a typical in-line dryer which depends on having an unlimited time to condense water out of Halon. However, the flow of Halon from a fire extinguisher through an in-line dryer may be too rapid to allow for condensation of sufficient quantities of water from the Halon to prevent freezing at the orifice.

The Wilbur patent discloses an old chemical fire extinguisher in which a powdered mixture, such as soda and acid, is maintained in a cartridge in a fire extinguisher; and, is kept separated from water in the fire extinguisher until such time as the fire extinguisher is to be used. The chemical is of course not a drying agent, and the patent has nothing to do with preventing freezing of the fire extinguisher outlet because of water in the fire extinguisher fluid.

The Office Action asserts that it would be obvious to take the drying agent of the Miller patent and place it into a separate cartridge of the type illustrated in the Wilbur patent. In addition to the fact that there is no suggestion from either patent to make such combination, there are reasons why it would not be obvious to do so. The Wilbur patent teaches that the dry material to be combined with water to produce gas is to be maintained separate from the water until gas is needed to expel liquid out of the fire extinguisher. This is in contrast to Applicant's arrangement where it is desirable that the fluid in the extinguisher not only be in contact with the drying agent at all times, it is important that it be in contact with the fluid for a period of time in order to absorb the water from the fluid in the extinguisher. If the drying agent were kept

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separate until the fire extinguisher was to be utilized, the drying agent would not have time to perform its function and freezing and the resultant clogging of the outlet would not be prevented. Conversely, not separating the chemical from the water in the Wilbur device would render it useless. Thus Applicant's invention is not rendered obvious based on these references.

It should also be noted that the in-line drying technique illustrated in the Miller patent has been utilized since 1980. The Miller patent itself issued in 1987, but it is not claiming the basic concept of an in-line dryer. The Wilbur patent issued in 1908. Thus, a long period of time has elapsed for improving the in-line drying technique in which the Wilbur patent technology was available. This long felt need, 20 years, is additional evidence that Applicant's invention was not obvious.

Although the claims as previously submitted are believed to be patentable over the new rejections, the claims have been amended to more clearly distinguish them over the cited art. Method Claim 1 has been amended to include the step of introducing fire extinguisher fluid into the fire extinguisher bottle and immediately into contact with the drying agent to remove water from the fluid. As noted above, the liquid introduced into the fire extinguisher bottle in the Wilbur patent remains separated from the dry materials in the interior container until the fire extinguisher is to be utilized. Additionally, Claim 1 as amended includes a step of spacing the container from the outlet to ensure that the container does not clog the outlet. Such combination is believed to be clearly patentable for the reasons given above. This, in turn, renders patentable its dependent Claims 3-12. Claims 13 and 14 have been canceled above.

Apparatus Claim 15 has been similarly amended by specifying that the drying agent container in the fire extinguisher bottle is open to the interior of the bottle so that as soon as fire extinguisher fluid is introduced into the bottle, the fluid comes into contact with the drying agent. It is submitted that Claim 15 is clearly patentable over the cited art. For the same reasons, its dependent Claims 17-21, 24-26, and new dependent Claims 28 and 29 are likewise patentable.

Consideration of new Claims 30-34 is requested. Those claims are directed to the drying agent container including its means for spacing the container from interior walls of a fire extinguisher bottle. Such combination is believed to be patentable over the cited art.

Based on the foregoing, it is believed that this Application is now in condition for allowance, and hence allowance is respectfully requested.

Appl. No. : 09-43,172
Filed : August 21, 2000

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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